

these stalks amounts not to a 500. part of an Inch, yet do they compose so strong a texture, as, notwithstanding the exceeding quick and violent beating of them against the Air, by the strength of the Birds wing, they firmly hold together. And it argues an admirable providence of Nature in the contrivance and fabrick of them; for their texture is such, that though by any external injury the parts of them are violently dis-joyn'd, so as that the leaves and stalks touch not one another, and consequently several of these rents would impede the Bird's flying; yet, for the most part, of themselves they readily re-join and re-context themselves, and are easily by the Birds stroking the Feather, or drawing it through its Bill, all of them settled and woven into their former and natural posture; for there are such an infinite company of those small fibres in the under side of the leaves, and most of them have such little crooks at their ends, that they readily catch and hold the stalks they touch.

From which strange contexture, it seems rational to suppose that there is a certain kind of mesh or hole so small, that the Air will not very easily pass through it, as I hinted also in the sixth Observation about small Glais Canes, for otherwise it seems probable, that Nature would have drawn over some kind of thin film which should have covered all those almost square meshes or holes, there seeming through the Microscope to be more then half of the surface of the Feather which is open and visibly pervious; which conjecture will yet seem more probable from the texture of the brushie wings of the *Tinea argentea*, or white Feather wing'd moth, which I shall anone describe. But Nature, that knows best its own laws, and the several properties of bodies, knows also best how to adapt and fit them to her designed ends, and who so would know those properties, must endeavour to trace Nature in its working, and to see what course she observes. And this I suppose will be no inconsiderable advantage which the *Schematisms* and Structures of Animate bodies will afford the diligent enquirer, namely, most sure and excellent instructions, both as to the practical part of *Mechanicks* and to the *Theory* and knowledge of the nature of the bodies and motions.

Observ. XXXVI. Of Peacocks, Ducks, and other Feathers of changeable colours.

THE parts of the Feathers of this glorious Bird appear, through the Microscope, no less gaudy then do the whole Feathers; for, as to the naked eye 'tis evident that the stem or quill of each Feather in the tail sends out multitudes of *Lateral* branches, such as A B in the third Figure of the 23. *Scheme* represents a small part of about  $\frac{1}{2}$  part of an Inch long, and each of the *lateral* branches emit multitudes of little sprigs, threads or hairs on either side of them, such as C D, C D, C D, so each of those threads in the Microscope appears a large long body, consisting of a multitude